**CHALLENGES OF DATA COLLECTION PROCESS: A REVIEW OF EXISTING LITERATURE**

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## Introduction

It has been emphasized that greenhorns in research may encounter unforeseen difficulties while collecting data for their theses due to several factors (Rimando, Brace, Namageyo-Funa, Parr, Sealy, Davis, Martinez, & Christiana, 2015). This statement implies that the process of data collection has its own predicaments. Doctoral students are usually taught how to collect data for research purposes but many of them still encounter difficulties during the process (Dearnley, 2005; Nicholl, 2010). It must be accepted that doctoral students will continue to seek assistance to tackle data collection challenges as they surface.

## Data collection challenges of qualitative design

**Researcher tiredness** is one of the hindrances to data collection for qualitative research. Conducting focus groups and interviews can be stressful for the researcher who is collecting the data. Researcher exhaustion is a key element to the smooth flow and achievement of successful focus groups and interviews (Dickson –Swift, James, Kippen, & Liamputton, 2007 ; Fern, 1982). This implies that researcher fatigue can reduce the quality of data. The onus is on the researcher to manage the fatigue associated with focus groups and interviews in order to ensure data quality. Researchers have to be observant, study people, listen attentively, and handle diverse personality types (Fern, 1982; Kreuger, & Casey, 2009). The researcher has the duty of enticing the quiet participants during focus groups so that every participant gets the chance to contribute. Fatigue can undoubtedly influence the researcher's competence to effectively handle interviews and focus groups. Unless the researcher is firmly in charge

of the meeting, the conversation could digress into irrelevant matters, possibly squandering participant's precious time (Orvik, Larun, Berland, & Ringsberg, 2013).

**Setting of interview** is a crucial element of the data gathering process (Gill, Stewart, Treasure, & Chadwick, 2008). The location of an interview is an indispensable constituent of data collection to which every researcher must give paramount attention. The quality of data collection, both good and bad, is significantly influenced by the location of interview. The interview venue, the administration office, was regularly used by the staff to discuss and resolve students' conflict, behavioural and academic related matters so many learners perceived they would be charged with an offence when they entered the room for a meeting (Rimando, et al., 2015). Respondents may hesitate to release information if they have a negative perception about the venue of the interview. They may have also provided erroneous responses to the interview question in fear that data would be used to victimize them. Studies with location challenges suggested that interviews should be conducted at an impartial venue that is suitable and secure for both the respondent and the research conductor, when applicable (Legard, Keegan, & Ward, 2003). One panacea for location challenges in data collection is doing due diligence in selecting an impartial venue for group focus and interviews. The inability of the participant to read and write may negatively affect the data gathering process (Rimando, et al., 2015). Verbosity in the conduct of an interview can put the respondent in a dilemma. The respondent may feel humiliated by his or her inability to understand the key words in the interview question. This can negatively affect the quality of response. Therefore, the researcher needs to study the literacy levels of respondents and consequently adjust the wordiness of his questionnaire to their level. Inferiority complex sets in when respondents begin to ask for clarification of words in interview questions. "Low literate respondents indicated the challenges they faced in their attempt to understand the wording of long questions, asked for explanation of terminology, and avoided eye contact with the researcher" (Rimando, et al., 2015). The above finding clearly shows that data quality greatly depends on the literacy levels of the respondents.

Respondents with low literacy standing faced challenges in comprehending the diction of the survey response arrangement: participants did not make out the disparities in the survey's response formation such as strongly agree, moderately agree, neither agree nor disagree, moderately disagree and strongly disagree (Rimando, et al., 2015). Novice researchers, while designing questionnaires, must have in mind the literacy levels of their respondents, and adjust the diction of their questionnaires to the respondents to avoid ambiguity. This can improve data quality. It is proposed that learners consider the factors below when designing instruments for collecting data: literacy level of potential respondents, the diction of data collection instrument, pilot testing of data collection instrument, the use of audio aid when necessary, and use of diverse data collection instruments to gather information on the same issues (Bonevski, Randell, Paul, Chapman, Twyman, Bryant, & Hughes, 2014; Mayer & Villaire, 2007).

**The period of data collection** poses a threat to the success of the data gathering process. The data gathering process can be negatively affected by the times pan of the data collection instrument or how time-consuming the data gathering process is (Rimando, et al., 2015). Lengthy questionnaires or interviews can create discomfort for respondents. Their discomfort may lead them to provide inappropriate responses to questions asked in questionnaires or interviews. In some cases, respondents may provide information that is of no use as they hastily partake in the data gathetring process (Rimando, et al., 2015). Lengthy questionnaires or interviews can result in thirst and hunger of the respondents. It is advisable to make provision for hunger and thirst, especially, if the researcher is aware of the the lengthy period of data collection. For instance, the researcher can provide furniture, water and cocktail for respondents before accomplishing the survey (Dearnley, 2005; Easton, McComish, & Greenberg, 2000).

**Data collection challenges of quantitative design**

**Decline in survey response** is a big challenge in data collection. Moreover, the gradual decrease in reaction to survey over the years poses the biggest challenge scholars have constantly encountered (Schmeets, 2010). I can say with confidence that there is gross apathy on the part of respondents when responding to questionnaires. Survey research is said to be established in the positivist paradigm consistent with objectivity in reality, impartial, and absolutely free of the influence both researcher and the subject (( Bielefield, 2006; Johnson, & Onwuegbuzie, 2004). The objectivity and independence of the reality of the positivist paradigm in which survey research is established may be compromised due to the apathy of respondents. The negative effect of this apathy can be minimized through the simultaneous use of diverse models of data collection. Contemporary research suggested the combination diverse paradigms into a single study (Terrell, 2012). Researchers must appreciate the need to sensitize respondents on the essence of data collection in addition to the simultaneous use of different models of data collection.

**Non-response of participants** in a sample size is a daunting challenge in data collection.

Survey researchers anticipate getting the smallest sample size to generate outcomes that are statistically consistent and generalizable as an insufficient sample can weaken the correctness of the conclusions (Barlett, Kotrlik, & Higgins, 2001). It can unequivocally be said that the accuracy of quantitative research results hinges on the sample size of the population. Although a group of researcher argued that a difference in non-response rate does not significantly alter survey assessment, it is principally advocated that non-response rate should be decreased to the bare minimum (Curtin, Presser & Singer, 2000; Keeter, Miller, Kohut, Groves, & Presser, 2000). A letter should be sent to the respondents in advance to reduce non-response rate (Hox, 2007). An advance letter will pre-inform and prepare the respondent towards the survey instrument. Random sampling delays the data collection process and frequently, scholars employ opportunistic samples, which they can attain with ease (Carr,

1994). The time-consuming nature of sampling can delay the release of research outcomes. .Therefore, the opportunistic sampling is the panacea to the time-consuming random sampling. However, the weakness of this method is that it waters down the generalization from the research findings (Onwuegbuzie, & Johnson, 2006). Making sampling decisions during the process of data collection is harmful to the results. The greatest solution to weaknesses of random sampling is doing due diligence.

**Validity of survey instrument** is a threat to the data collection process.

"Quantitative researchers share the delight that the conclusions they would deduce from examining data would be incredible, impartial and consistent (Adzeh, 2014, para. 11). It is the joy of every researcher to hear that the result of his work has been adjudged credible, objective and reliable. This is the anticipation of all researchers. However, this expectation of researchers is dashed by a collection of hazards that may happen at any phase in the research process, which can negatively influence the cogency of the investigation. These hazards have been categorized into *content, criterion*, and *construct validity* of the questionnairre (Onwuegbuzie, & Johnson, 2006).

Content validity concerns the extent to which items on the questionnaire are related and illustrative of the hypothesis they aim to assess (Rossiter, 2008). Content validity consists of face validity, item validity and sampling validity (Onwuegbuzie, & Johnson, 2006). Face validity, in itself, depicts how properly a questionnaire appears to assess what it has been created to assess. Face validity concerns itself with an unofficial confirmation of the questionnaire with the intention of making sure that it is suitably created to gather appropriate facts from the targeted group of people (Collins, 2003). This confirms the use of field pretest by survey researchers to find out feedback on areas of weaknesses that may require correction. Recommendations made out of the pilot test may enhance the effectiveness of the survey instrument but researchers should not completely rely on them. Researchers should not exclusively rely

on suggestions from field pretest because additional modifications may be required before the utilization of the instrument (Betts, 2011).

Precisely, criterion validity comprises concurrent validity and predictive validity (Onwuegbuzie, & Johnson, 2006). Concurrent validity refers to the compatibility of items on the survey instrument whilst predictive validity concerns itself with forecasting the ability of the instrument to measure the construct for which it has been created. Moreover, researchers who adopt the survey method pursue specialist advice on the outlook, applicability and the veracity of every element of the questionnaire with the intention of making sure that the instrument assesses the precise concept (Turocy, 2002). The procedure demands putting forward the precise issues, ascertaining the actual standard, possessing suitable arithmetic know-how and capability of employing competent reviewers. This winding process is a challenge so some researchers try to avoid it. This avoidance was demonstrated by Coca-Cola, in 1985, when it neglected to enquire from buyers, just in case they desired the brand-new Coke flavour more than the previous type, which was an ideal criterion aimed at measuring the choices ahead of launching the *New Coke* (Shuttleworth, 2009). It resulted in one of the greatest failures of product promotion in those days due to the negligence of Coca-Cola in framing the essential interrogation of its consumers, "Do you want a new Coke?"(Ross, 2005).Survey researchers need to be extra patient, careful and diligent enough in the construction of questionnaires in order to overcome criterion validity challenges.

Construct validity refers to the magnitude of the absence of assessment mistakes in questionnaires (O'Leary-Kelly & Vokurka, 1998). Undoubtedly, a survey instrument that is highly rated in construct validity enhances the quality of data it is used to collect. From another perspective, construct validity tackles the authenticity of the measure, the correctness of the elements and the prudence of their diction (Burton, & Mazerolle, 2011; Parasuraman, Zeithaml & Berry, 1998). Construct validity has to do with the authenticity or veracity of the wording of the constituents of a survey instrument. Construct

validation of an instrument is the act of verifying and establishing its truthfulness. Construct validation becomes necessary when a research conductor deems the recommended questionnaire illustrative of a definite hypothesis which has a distinct implication accompanying it ( Cronbach & Meehl, 1995) The challenge is that the researcher has the responsibility of making sure that the understanding of the hypothesis of the study is made easy for the respondents. I emphatically suggest that there is the need for researchers to conduct field pretest repeatedly to enhance the construct validation of the survey. The obtainment of high quality data largely depends on the comprehensive nature of the validation process of a survey instrument.

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